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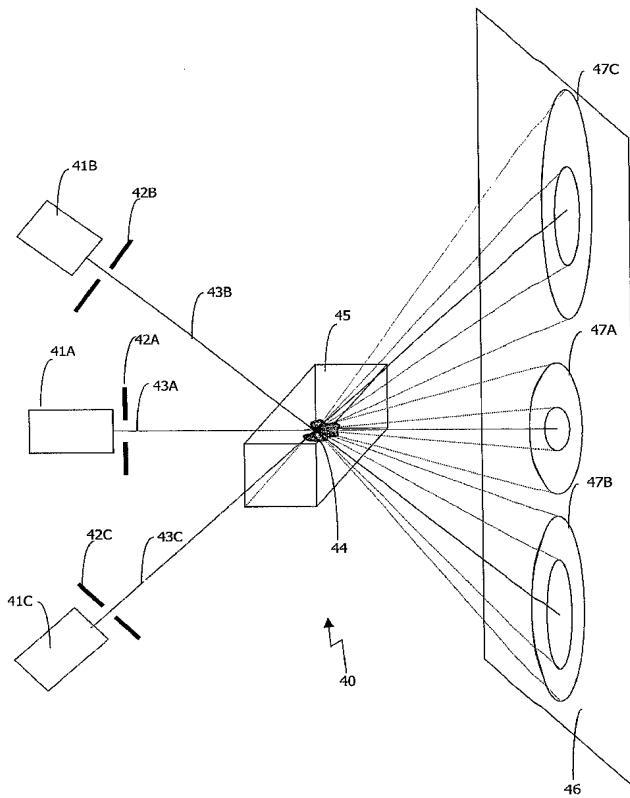
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(54) Title: AN X-RAY DIFFRACTION (XRD) MEANS FOR IDENTIFYING THE CONTENT IN A VOLUME OF INTEREST AND A METHOD THEREOF



(57) Abstract: The present invention discloses an XRD means for identifying the content of a volume of interest (VOI) and a method thereof. A remote XRD means is comprised inter alia of a plurality of X-ray sources targeted towards said VOI; a plurality of X-ray detectors adapted to receive diffracted X-rays; a processor adapted to measure said patterns; a database comprising records of patterns' parameters; and, an alerting means adapted for identifying material as one of said predetermined group. This invention also discloses a method of acquiring XRD image of a material in a VOI, comprised of receiving VOI coordinates; irradiating the material in the VOI; acquiring, extracting and converting of XRD patterns of said VOI to standard powder X-ray diffraction spectrum; matching records in a database for material identification; and alerting when said material is in matching a predetermined record.

WO 2005/065039 A2



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